United States Department of Agriculture
Natural Resources Conservation Service

OMB No. 0578-0030
NRCS-PDM-20

DAMAGE SURVEY REPORT (DSR)
Emergency Watershed Protection Program – Recovery

Section 1A

NRCS Entry Only
Eligible: YES X NO __
Approved: YES X NO __
Funding Priority Number (from Section 4) 2e
Limited Resource Area: YES _ NO X

Date of Report: 02/25/2006

DSR Number: 019-005-057R Project Number: Choupique Bayou – Lateral 12 and Sub Lateral LL-12

Section 1B Sponsor Information

Sponsor Name: Gravity Drainage District 5, Ward 4

Address: 1331 Swisco Road

City/State/Zip: Sulphur, Louisiana 70665

Telephone Number: (337) 625 3851 Fax: (337) 625 8402

Section 1C Site Location Information

County: Calcasieu Parish State: Louisiana Congressional District: 07

Lateral L-12: Start Latitude: N30.1870 Longitude: W93.4264 End Latitude: N30.1878 Longitude: W93.4224
Sub Lateral LL-12: Start Latitude: N30.1878 Longitude: W93.4256 End Latitude: N30.1904. Lonitude: W93.4241

Section: 18 Township: 10 S Range: 10 W

UTM Coordinates: Start: 15–458953E, 3339578N End: 59337E, 3339671N and Start: 15-459029E, 3339672N End: 459175E, 333960N

Drainage Name: Choupique Bayou Reach: Lateral L -12 and Sub Lateral LL -12 (See attached map and Lat/Long Coordinate)

Damage Description: Trees, branches and other debris are in the channel resulting in partial blockage of the drainage.

Section 1D Site Evaluation

All answers in this Section must be YES in order to be eligible for EWP assistance.

Site Eligibility	YES	NO	Remarks
Damage was a result of a natural disaster?*	X		Hurricane Rita wind and storm damage
Recovery measures would be for runoff retardation or soil erosion prevention?*	X		Reduce upstream flooding, streambank erosion, and scour erosion
Threat to life and/or property?*	X		Reduce flooding and debris accumulation around bridges
Event caused a sudden impairment in the watershed?*	X		Downed trees and other debris have created blocks and increased flooding severity and frequency.
Imminent threat was created by this event?**	X		Flood damage and damages to major bridges from accumulated debris
For structural repairs, not repaired twice within ten years?**	X		No evidence of repairs related to flooding or storm damages in past several years
Site Defensibility			
Economic, environmental, and social documentation adequate to warrant action? (Go to pages 3, 4, 5 and 6 ***)	X		See attached documentation
Proposed action technically viable? (Go to Page 9 ***)	X		See attached documentation

Have all the appropriate steps been taken to ensure that all segments of the affected population have been informed of the EWP program and its possible effects? YES **X** NO __
Comments: GDD No. 5 Ward 4 has been informed of plans to remove debris

* Statutory
** Regulation
*** DSR Pages 3 through 6 and 9 are required to support the decisions recorded on this summary page. If additional space is needed on this or any other page in this form, add appropriate pages.1 of 14

DSR NO: 019-05-057R

Section 1E Proposed Action

Describe the preferred alternative from Findings: Section 5 A:

Remove downed trees, branches, and other debris from one side of channel and haul debris from site to landfill. Work on Lateral L-12 will be accomplished from the south side of the channel to avoid impacts to forested areas. Work on Lateral LL-12 will be accomplished from one side of channel, but contractor may alternate from one side to the other as needed to avoid houses, lagoon systems and fences that are adjacent to the channel.

Total installation cost identified in this DSR: Section 3: $ 34,404.00

Section 1F NRCS State Office Review and Approval

Reviewed By: _____ Date Reviewed: 3/10/06
State EWP Program Manager

Approved By: Donald W. Gohmert Date Approved: 3/10/06
State Conservationist

PRIVACY ACT AND PUBLIC BURDEN STATEMENT

NOTE: The following statement is made in accordance with the Privacy Act of 1974, (5 U.S.C. 552a) and the Paperwork Reduction Act of 1995, as amended. The authority for requesting the following information is 7 CFR 624 (EWP) and Section 216 of the Flood Control Act of 1950, Public Law 81-516, 33 U.S.C. 701b-1; and Section 403 of the Agricultural Credit Act of 1978, Public Law 95-334, as amended by Section 382, of the Federal Agriculture Improvement and Reform Act of 1996, Public Law 104-127, 16 U.S.C. 2203. EWP, through local sponsors, provides emergency measures for runoff retardation and erosion control to areas where a sudden impairment of a watershed threatens life or property. The Secretary of Agriculture has delegated the administration of EWP to the Chief or NRCS on state, tribal and private lands.

Signing this form indicates the sponsor concurs and agrees to provide the regional cost-share to implement the EWP recovery measure(s) determined eligible by NRCS under the terms and conditions of the program authority. Failure to provide a signature will result in the applicant being unable to apply for or receive a grant the applicable program authorities. Once signed by the sponsor, this information may not be provided to other agencies. IRS, Department of Justice, or other State or Federal Law Enforcement agencies, and in response to a court or administrative tribunal.

The provisions of criminal and civil fraud statutes, including 18 U.S.C. 286, 287, 371, 641, 651, 1001; 15 U.S.C. 714m; and 31 U.S.C. 3729 may also be applicable to the information provided. According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0578-0030. The time required to complete this information collection is estimated to average 117/1.96 minutes/hours per response, including the time for reviewing instructions, searching existing data sources, field reviews, gathering, designing, and maintaining the data needed, and completing and reviewing the collection information.

USDA NONDISCRIMINATION STATEMENT

"The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.)

Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write USDA, Director of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-941 0 or call (800)795-3272 (voice) or (202)720-6382 (TDD). USDA is an equal opportunity provider and employer.

Civil Rights Statement of Assurance

The program or activities conducted under this agreement will be in compliance with the nondiscrimination provisions contained in the Titles VI and VII of the Civil Rights Act of 1964, as amended; the Civil Rights Restoration Act of 1987 (Public Law 100-259); and other nondiscrimination statutes: namely, Section 504 or the Rehabilitation Act of 1973, Title IX of the Amendments of 1972, the Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990. They will also be in accordance with regulations of the Secretary of Agriculture (7 CFR 15, 15a, and 15b), which provide that no person in the United States shall on the grounds of race, color, national origin, gender, religion, age or disability, be excluded from participation in, be denied the benefits of, or otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the U.S. Department of Agriculture or any agency thereof.

DSR NO: ____019-05-057R_____

Section 2 Environmental Evaluation

2A Resource Concerns	2B Existing Condition	2C Alternatives and Effects		
		Proposed Action	**No Action**	**Alternative**
		Remove tree logs and debris from one side of channel and haul to landfill. Work from south side on L-12 and alternate on LL-12	**Leave tree logs and debris in channel**	**Remove tree logs and debris from both sides of channel and haul to landfill.**
		2D Effects of Alternatives		
Soil				
Bank Erosion	Stable except for exposed soil around uprooted trees on stream bank	Cause temporary increase in bank erosion from removal activities on access side of channel.	Erosion from root mass will stabilize, but flooding will cause more bank erosion and undercutting	Cause temporary increase in bank erosion from removal activities access side of channel.
Compaction	No compaction	Heavy equipment will moderately compact soil at access points	No compaction	Heavy equipment will moderately compact soil at access points on both sides.
Water				
Flooding	Property upstream of debris blockage is subject to damages from flooding after next heavy rainfall event	Upstream flooding will be reduced and damages to property will be minimized from heavy rainfall events	Property upstream of debris blockage will continue to be subject to damages from next heavy rainfall event	Upstream flooding will be reduced and damages to property will be minimized from heavy rainfall events
Inadequate outlets	Debris is blocking outlets	Outlets will be opened, capacities will be increased and flooding will be reduced	Debris will continue to accumulate and further reduce outlet capacities	Outlets will be opened, capacities will be increased and flooding will be reduced
Excessive Sediments and turbidity	Stream flow is minimal and no sediment problems will occur until next heavy rainfall event. Water in channel is turbid from sediment and sewage	Disturbance from heavy equipment and removal of debris will cause short term increase in sed. and turbidity, but will reduce long term impacts Sewage problems will remain	Sediments and turbidity will increase as a result of stream bank erosion and scour damage following next heavy rainfall event. Sewage problems will remain	Disturbance from heavy equipment and removal of debris will cause short term increase in sed. and turbidity, but will reduce long term impacts. Sewage problems will remain
Stream health (including SVAP))	3.6 (Poor Conditions)	3.6 (Poor Conditions)	3.1 (Poor Conditions)	3.4 (Poor Conditions)
Air				
Particulate Matter less than PM 10	No particulate matter is being generated by debris in channel	Will cause slight increase in particulate matter as result of disturbance, but will remain below 10mm	No change in particulate matter	Will cause slight increase in particulate matter as result of disturbance, but will remain below 10mm
Plant				
Productivity, Health and Vigor of Riparian Vegetation	Riparian trees have been blown down as result of wind. Natural regeneration will occur where canopy has been opened to sunlight	Some standing trees on access side of channel will be removed for access and hauling debris. Natural regeneration will restore disturbed areas	No trees will be disturbed by removal.	Some standing trees on both sides of channel will be removed for access and hauling debris. Natural regeneration will restore disturbed areas
Productivity, and Health of Aquatic Vegetation	Aquatic plants are limited because of turbidity and sewage water	Removal of debris will not impact aquatic vegetation.	Stream aquatic growth will remain poor with limited vegetation	Removal of debris will not impact aquatic vegetation.
Animal				
Inadequate Cover/Shelter for Stream Fisheries (also see SVAP)	Fishery habitat is poor as result of sewage, turbidity and adjacent urban disturbance.	Poor water quality caused by sewage, turbidity, and urban will remain. Debris removal will have minimal adverse impact	Poor water quality caused by sewage and lack of water will remain as limiting factors for fisheries	Poor water quality caused by sewage and limited water will remain. Debris removal will have minimal adverse impact
Inadequate Cover/Shelter for Wildlife along Stream Corridor	Riparian forest buffer is providing good cover and greenbelt for urban habitat, but is limited because of development surrounding the drainage ditch	There will be a moderate reduction in cover along excavated side of channel where trees and understory are removed. Natural regeneration will restore cover.	Riparian forest buffers will remain "as is" in remaining undeveloped stream segments. Buffers will remain limited in areas of urban development	There will be a moderate reduction in cover along both sides of channel where trees and understory are removed. Natural regeneration will restore cover.
Other				
Aesthetics	Interspersed trees and natural areas close to homes results in attractive landscape except for impact downed trees	Access will reduce the amount of forest cover on excavated side, but will not noticeably impact the overall urban environment	The landscape will remain the same except for any changes that may be caused by flooding	Access will reduce the amount of forest cover on excavated side, but will not noticeably impact the overall urban environment
Mosquito and Insect Vectors	Few small pools of stagnant water and sewage lagoons provide mosquito habitat	The number of stagnant pools providing habitat for mosquito will be reduced.	The stagnant pools providing habitat for mosquitos will remain.	The number of stagnant pools providing habitat for mosquito will be reduced.

DSR NO: 019-05-057 R

Section 2E Special Environmental Concerns

Resource Consideration	Existing Condition	Alternatives and Effects		
		Proposed Action	No Action	Alternative
Clean Water Act Waters of the U.S.	Poor Water Quality, Low DO, High BOD	Improved water quality. CWA 404 Permit required. Water Quality Certification possible.	Decreased water quality. Increased blockage and flooding	Improved water quality. CWA 404 Permit required. Water Quality Certification possible.
Coastal Zone Management Areas	N/A	N/A	N/A	N/A
Coral Reefs	N/A	N/A	N/A	N/A
Cultural Resources	Use FOTG guidance. State level review needed	Same as existing	Same as existing	Same as existing
Endangered and Threatened Species	Use FOTG guidance USFWS/LDWF list shows species in parish, but none are likely in project area	No impacts	No impacts	No impacts
Environmental Justice	Not a factor in this project area	Not a factor in this project area	Not a factor in this project area	Not a factor in this project area
Essential Fish Habitat	No essential fish habitat within this project area	No essential fish habitat within this project area	No essential fish habitat within this project area	No essential fish habitat within this project area
Fish and Wildlife Coordination	No stream modification proposed	Will coordinate if issues arise in CWA 404 permit application process	N/A	Will coordinate if issues arise in CWA 404 permit application process
Floodplain Management	Project boundary is within 100 year floodplain	Improve drainage and reduce level of flooding to pre hurricane conditions	N/A	If selected, project will improve drainage and reduce level of flooding to pre-storm conditions
Invasive Species	Chinese Tallow trees along channel in some segments	Will remove some invasive trees at access locations and allow increased control opportunities	Will likely increase	Will remove some invasive trees at access locations and allow increased control opportunities
Migratory Birds	Provides habitat for neotropical migrants	Slightly reduce habitat for neotropical migrants where trees are removed	Continue to provide same level of habitat	Slightly reduce habitat for neotropical migrants where trees are removed
Natural Areas	Use FOTG guidance. No natural areas identified in project area	Use FOTG guidance. No natural areas identified in project area	Use FOTG guidance. No natural areas identified in project area	Use FOTG guidance. No natural areas identified in project area
Prime and Unique Farmlands	Use FOTG guidance and soil survey. Mt soil occurs in project area , but not prime in urban area	Mt soil occurs in project area, but not prime when in urban area	Mt soil occurs in project area, but not prime when in urban area	Mt soil occurs in project area, but not prime when in urban area
Riparian Areas	Downed timber has further reduced and altered the already disturbed forested riparian habitat	No standing timber or noticeable impacts on riparian areas are expected	Downed timber and altered riparian area will remain until natural process restores habitat	No standing timber or noticeable impacts on riparian areas are expected
Scenic Beauty	Use FOTG guidance. Downed timber has reduced aesthetics of stream and riparian areas	Stream aesthetics will be restored, Riparian habitat will not be noticeably impacted	Downed timber in stream and along riparian areas will continue to reduce aesthetics.	Stream aesthetics will be restored, Riparian habitat will not be noticeably impacted
Wetlands	Downed timber and debris has altered wetland functions and values	Removal of debris will restore nature wetland functions and values to pre-storm conditions	Wetland functions and values will remain altered.	Removal of debris will restore nature wetland functions and values to pre-storm conditions
Wild and Scenic Rivers	Use FOTG guidance. No listed streams affected by project	No impact on listed streams or rivers	No impact on listed streams or rivers	No impact on listed streams or rivers

Completed By: Steve Tully, Biologist Date: 02/25/06

DSR NO: 019–05–057R

Section 2F Economic

This section must be completed by each alternative considered (attach additional sheets as necessary).

	Future Damages ($)	Damage Factor (%)	Near Term Damage Reduction
Properties Protected (Private)			
1 House	$188,491	25%	$47,123
12 Houses at $71,949 each	$863,388	25%	$215,874
Properties Protected (Public)			
Parish bridge on Pete Seay Road	$16,000	25%	$4,000
Public Utilities, buried and surface, 2 miles	$10,000	50%	$5,000
Business Losses			
None	0		0
Other			
None	0		0
		Total	$271,997
Net Benefits (Total of Economic Costs – Engineering Cost Estimate from Section 3)			**$237,193**

Completed By: Mark D. Conkling Date: February 23, 2006

Section 2G Social Consideration

This section must be completed by each alternative considered (attach additional sheets as necessary).

	YES	NO	Remarks
Has there been a loss of life as a result of the watershed impairment?		X	
Is there the potential for loss of life due to damages from the watershed impairment?	X		
Has access to a hospital or medical facility been impaired by watershed impairment?	X		Flooding may temporarily make streets impassable.
Has the community as a whole been adversely impacted by the watershed impairment (life and property ceases to operate in a normal capacity)		X	
Is there a lack or has there been a reduction of public safety due to watershed impairment?	X		Flooding may restrict access for fire, police, ambulance and other emergency services.

Completed By: Mark D. Conkling Date: February 23, 2006

DSR NO: 019-05-057R

Section 2H Group Representation and Disability Information

This section is completed only for the preferred alternative selected.

Group Representation	*Census Data* Number	*Affected*
American Indian/Alaska Native Female Hispanic		
American Indian/Alaska Native Female Non-Hispanic		
American Indian/Alaska Native Male Hispanic	1 0.13%	**0**
American Indian/Alaska Native Male Non-Hispanic		
Asian Female Hispanic		
Asian Female Non-Hispanic		
Asian Male Hispanic	1 0.13%	**0**
Asian Male Non-Hispanic		
Black or African American Female Hispanic		
Black or African American Female Non-Hispanic	1 0.13%	**0**
Black or African American Male Hispanic		
Black or African American Male Non-Hispanic	1 0.13%	**0**
Hawaiian Native/Pacific Islander Female Hispanic		
Hawaiian Native/Pacific Islander Female Non-Hispanic		
Hawaiian Native/Pacific Islander Male Hispanic	1 0.13%	**0**
Hawaiian Native/Pacific Islander Male Non-Hispanic		
White Female Hispanic	2 0.26%	**0**
White Female Non-Hispanic	390 52.14%	**20**
White Male Hispanic	2 0.26%	**0**
White Male Non-Hispanic	349 46.66%	**18**
Total Group	748 100.00%	**39**

Census tract(s) Tract 34, Blocks 1005, 1006, 1007 and 1008

Completed By: Mark D. Conkling Date: February 23, 2006

Note: Demographic information is from the 2000 US Census. See attached tables for details. The data indicates there are 748 persons in 235 homes. 748/235 = 3.2 persons/household. There are 12 homes that could potentially flood if project is not completed. 12 x 3.2 = **39 persons potentially affected directly**. Other persons in the area would be temporarily inconvenienced.

DSR NO: 019-05-058R

Section 2I. Required consultation or coordination between the lead agency and/or the RFO and another governmental unit including tribes:

Easements, permissions, or permits:

Access to channel from private properties will require easements/permission to be obtained by sponsor. Recommend consultation of contractor for Right of Way access to channel to accommodate equipment being used. Coordination will be handled by NRCS representative to reduce amount of impact to surrounding environment.

Will need CWA 404 permit and Water Quality certification possibly needed because of potential of removing roots masses and grubbing stumps.

Mitigation Description:

Access to remove debris from Lateral L-12 will be from the south side of channel in order to minimize impacts to woodland and natural riparian habitats. This alternative will prevent impacts to several areas of mature timber on the north side. Lateral LL-12 has minimal riparian buffer, but part of it will be protected by alternating from one side to the other to avoid larger trees and to avoid impacts to backyard lagoons that could discharge into the stream. Proposed action will help restore hydraulic function to downstream wetlands and reduce mosquito breeding areas and vector problems in adjacent floodplains. Action will be completed without interruption to reduce impacts to stream fisheries, wildlife, and local residents.

Agencies, persons, and references consulted, or to be consulted:

Corps of Engineers, New Orleans District
Louisiana Department of Environmental Quality
Louisiana Department of Wildlife and Fisheries
Calcasieu Parish Government

DSR NO: _019-005-057R

Section 3 Engineering Cost Estimate

Completed By: _____Steve Garner_____ Date: _____2/25/2006_____

This section must be completed by each alternative considered (attach additional sheets as necessary).

Proposed Recovery Measure (including mitigation)	Quantity	Units	Unit Cost ($)	Amount ($)
Mobilization and Demobilization	1	LS	5,000	5,000
Channel Obstruction Removal (Light w/ Complexities)	3,795	LF	7.59	28,804
Seeding, Sprigging and Mulching	3	Ac	200	600
Total Installation Cost (Enter in Section 1F)$				34,404

Alternate Recovery Measure (including mitigation)	Quantity	Units	Unit Cost ($)	Amount ($)
Mobilization and Demobilization	1	LS	5,000	5,000
Channel Obstruction Removal (Light w/ Complexities)	3,795	LF	7.59	28,804
Seeding, Sprigging and Mulching	5	Ac	200	1,000
Total Installation Cost (Enter in Section 1F)$				34,804

Unit Abbreviations:
AC Acre
CY Cubic Yard
EA Each
HR Hour
LF Linear Feet
LS Lump Sum
SF Square Feet
SY Square Yard
TN Ton
Other (Specify)

Section 4 NRCS EWP Funding Priority

Complete the following section to compute the funding priority for the recovery measures in this application (see instructions on page 10).

Priority Ranking Criteria	Yes	No		Ranking Number Plus Modifier
1. Is this an exigency situation?		X		
2. Is this a site where there is serious, but not immediate threat to human life?	X			2e
3. Is this a site where buildings, utilities, or other important infrastructure components are threatened?	X			
4. Is this site a funding priority established by the NRCS Chief?		X		
The following are modifiers for the above criteria			**Modifier**	
a. Will the proposed action or alternatives protect or conserve federally-listed threatened and endangered species or critical habitat?				
b. Will the proposed action or alternatives protect or conserve cultural sites listed on the National Register of Historic Places?				
c. Will the proposed action or alternatives protect or conserve prime or important farmland?				
d. Will the proposed action or alternatives protect or conserve existing wetlands?				
e. Will the proposed action or alternatives maintain or improve current water quality conditions?			e	
f. Will the proposed action or alternatives protect or conserve unique habitat, including but not limited to, areas inhabited by State-listed species, fish and wildlife management area, or State identified sensitive habitats?				

Enter priority computation in Section 1A, NRCS Entry, Funding priority number.

Remarks:

DSR NO: _____

Section 5A Findings

Finding: Indicate the preferred alternative from Section 2 (Enter to Section 1E):

Remove downed trees, branches, and other debris from one side of channel and haul debris from site to landfill. Work on Lateral L-12 will be accomplished from the south side of the channel to avoid impacts to forested areas. Work on Lateral LL-12 will be accomplished from one side of channel, but contractor may alternate from one side to the other as needed to avoid houses, lagoon systems and fences that are adjacent to the channel.

I have considered the effects of the action and the alternatives on the Environmental Economic, Social; the Special Environmental Concerns; and the extraordinary circumstances (40 CFR 1508.27). I find for the reasons stated below, that the preferred alternative:

__X__ Has been sufficiently analyzed in the EWP PEIS (reference all that apply)
Chapter 5.2.2.1.2
Chapter _____
Chapter _____
Chapter _____
Chapter _____

____ May require the preparation of an environmental assessment or environmental impact statement.
The action will be referred to the NRCS State Office on this date:

NRCS representative of the DSR team

Steve Garner, Mark Conkling, and Steve Tully Date: February 25, 2006

Section 5B Comments:

Section 5C **Sponsor Concurrence:** James Richard Blackwell

Sponsor Representative

Title: Superintendent Date: 3/2/06

Section 6 Attachments:

A. Location Map
B. Site Plan or Sketches
C. Other (explain)

SECTION 6

ATTACHMENTS

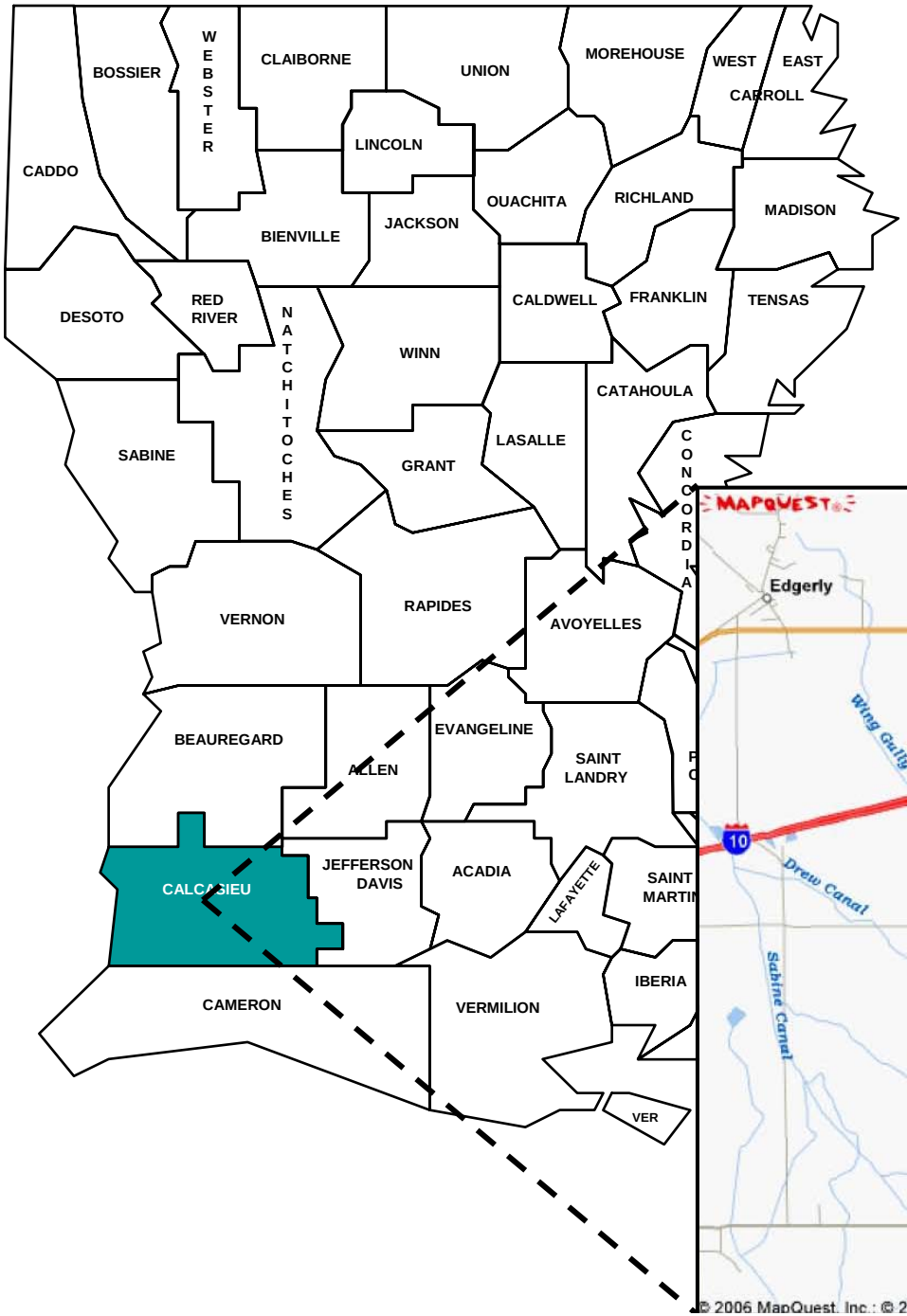
Vicinity Location Map

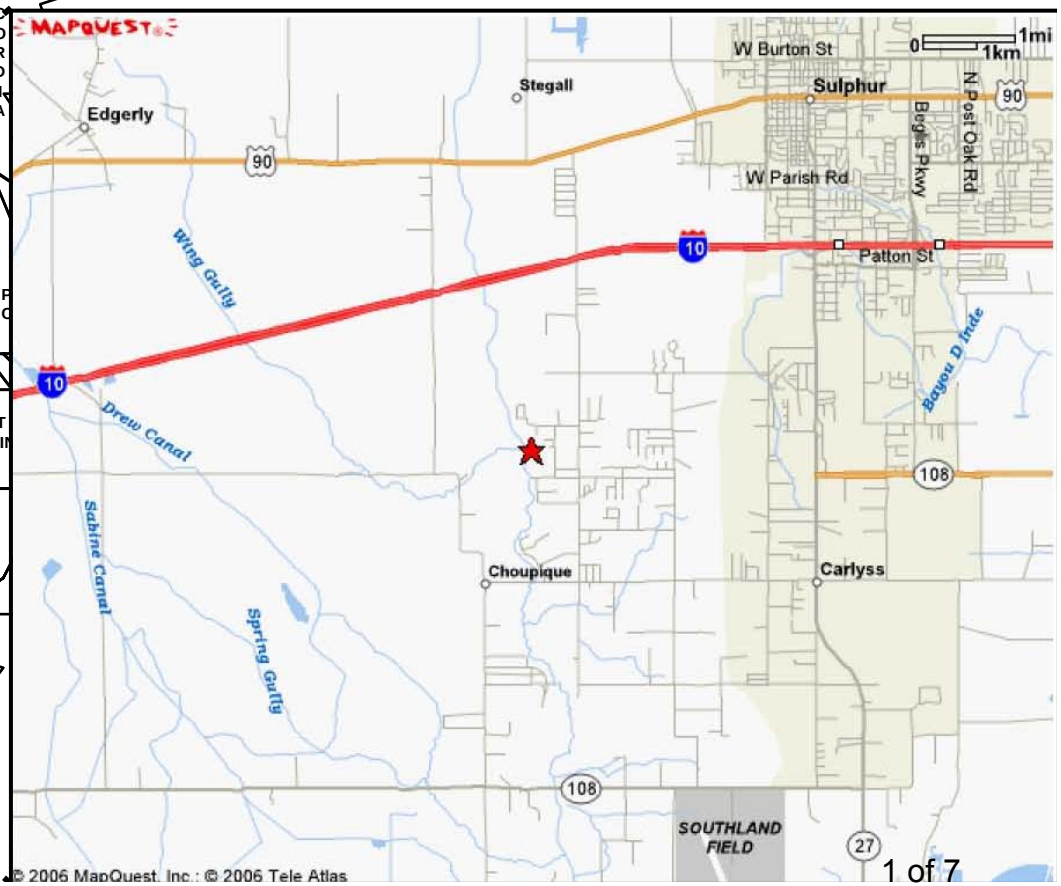
Calcasieu Parish

DSR# 019-05-057R

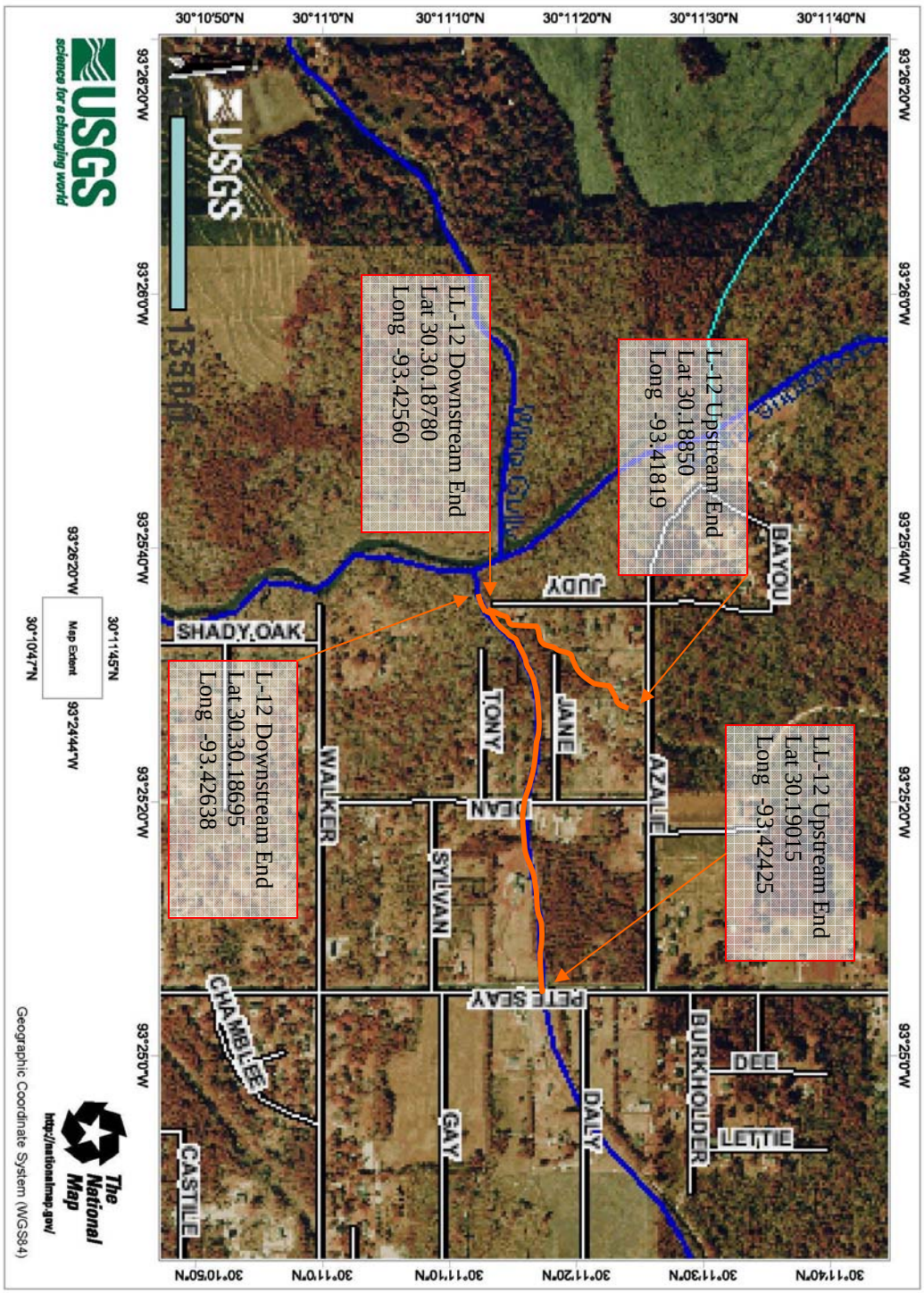
Laterals L-12 & LL-12 of

Choupique Bayou

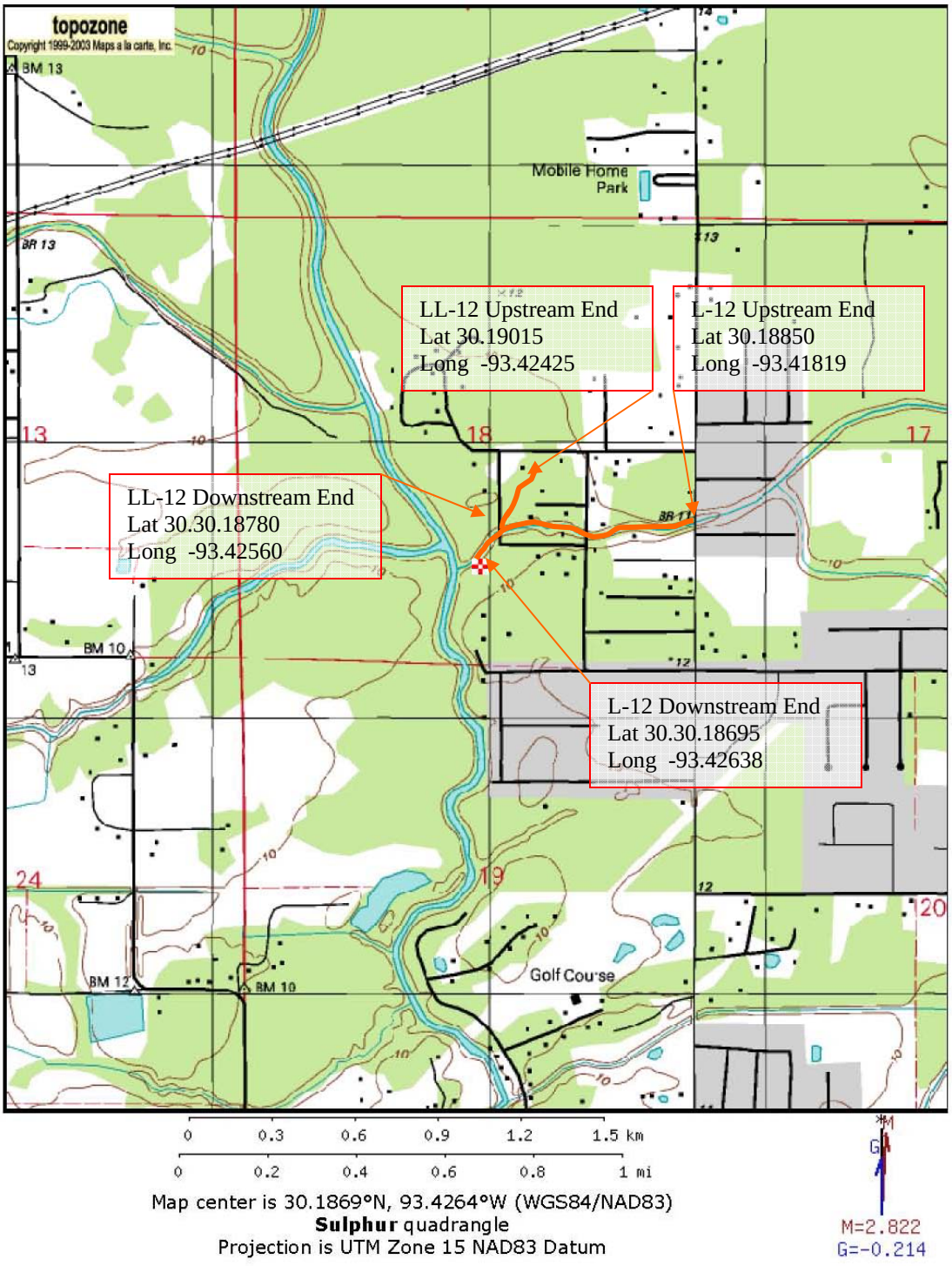




SITE MAP
DSR 019-05-057R
L-12 & LL-12 of
Choupique Bayou
Calcasieu Parish



TOPO MAP
DSR 019-05-057R
L-12 & LL-12 of
Choupique Bayou
Calcasieu Parish

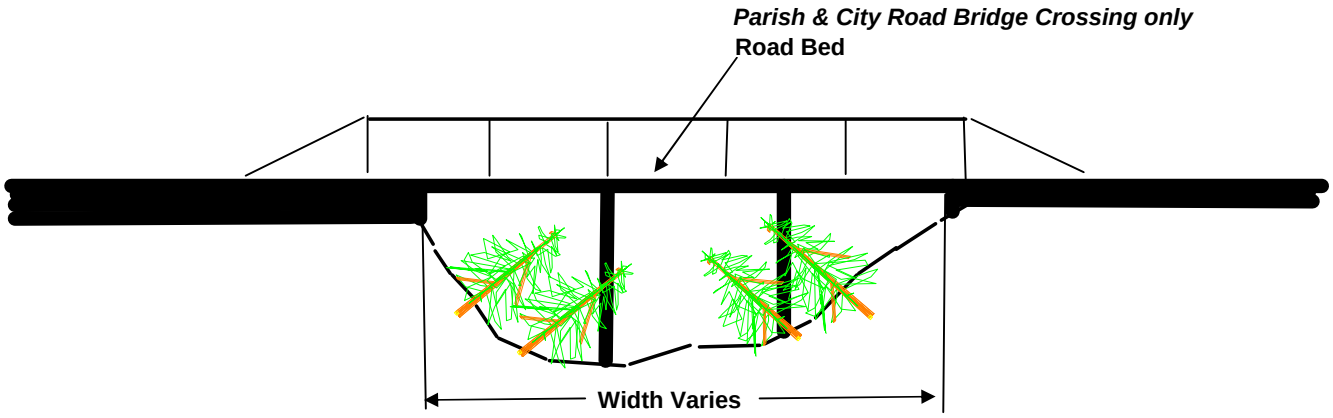


DSR NO: 019-05-057R

CHANNEL: L-12 and LL-12

PARISH/SPONSOR: Calcasieu / Gravity Drainage District 5

Debris Removal



Note: Contract is to remove Debris from upstream and downstream Bridge which includes underside of bridge
Exception: All Crossing which cross State or Federal highways are not included in contract

Typical Road Bridge Crossing
Not to Scale

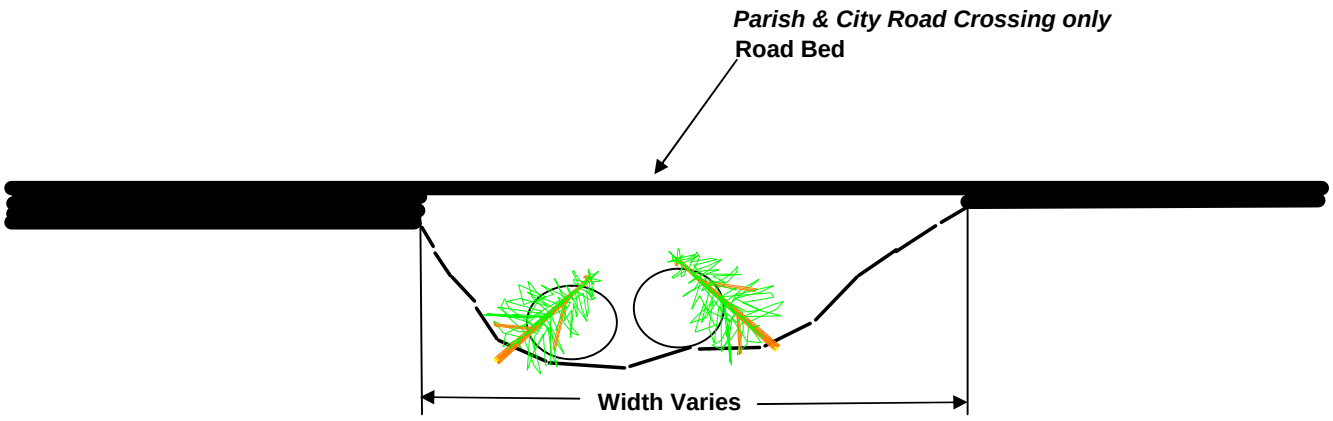
Notice:
48 Hours Before Digging
Call 1-800-272-3020

DSR NO: 019-05-057R

CHANNEL: L-12 and LL-12

PARISH/SPONSOR: Calcasieu / Gravity Drainage District 5

Debris Removal



Note: Contract is to remove Debris from upstream and downstream Culverts which includes inside of culverts
Exception: All Crossing which cross State or Federal highways are not included in contract

Typical Road Culvert type Crossing
Not to Scale

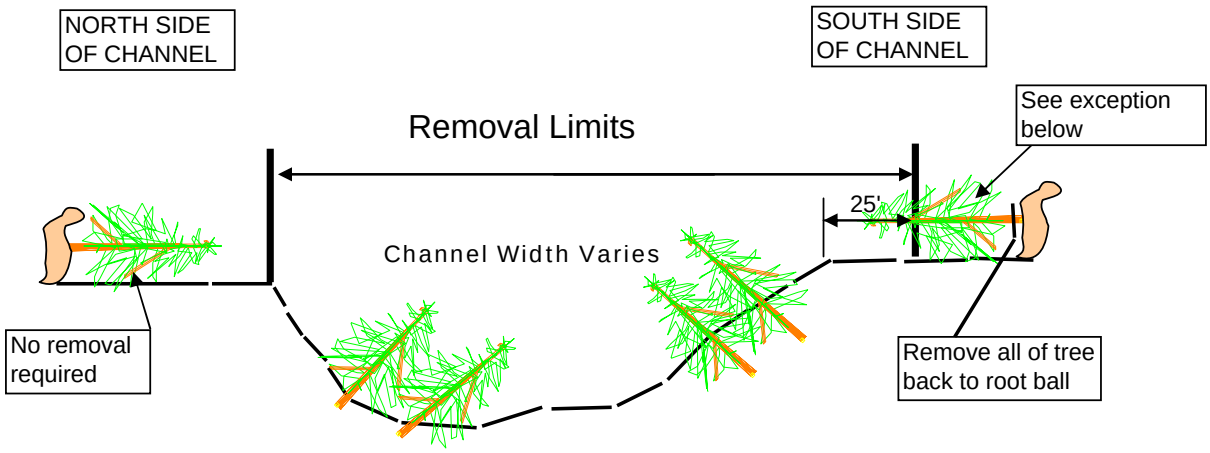
Notice:
48 Hours Before Digging
Call 1-800-272-3020

DSR NO: 019-05-057R

CHANNEL: L-12 and LL-12

PARISH/SPONSOR: Calcasieu / Gravity Drainage District 5

Debris Removal



Typical Section CHANNEL L-12

Notice:
48 Hours Before Digging
Call 1-800-272-3020

***Note** : Access and work from south side only, except in locations where structures do not permit as concurred in by the COTR*

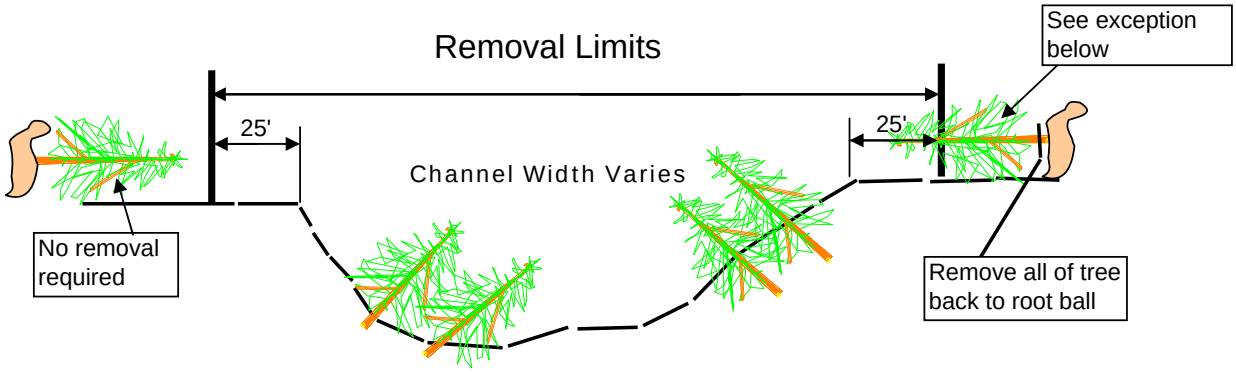
***Exception** it may be possible that trees which were located outside of the the removal limits may have fallen into the removal limits, the entire tree will be removed back to the root ball even if only a portion of the tree is withinthe removal limits*

DSR NO: 019-05-057R

CHANNEL: L-12 and LL-12

PARISH/SPONSOR: Calcasieu / Gravity Drainage District 5

Debris Removal



Typical Section CHANNEL LL-12

Notice:
48 Hours Before Digging
Call 1-800-272-3020

***Note** : Access and work both sides; however work to be performed on one side only in any reach as concurred in by COTR.*

***Exception** it may be possible that trees which were located outside of the the removal limits may have fallen into the removal limits, the entire tree will be removed back to the root ball even if only a portion of the tree is withinthe removal limits*

DSR No: 019-05-057R | 2C Proposed Action Alternative

Section 5 Engineering Cost Estimate Worksheet

Parish: Calcasieu
Channel: L-12 and LL-12
Location: Choupique Bayou

Completed By: Steve Garner **Date:** 25-Feb-06

Type of Work: Debris Removal

Location of Work:

Township(s)	Range(s)	Section(s)	Quadrangle(s)
10 S	10 W	19	

	Reach or Channel Seg		Reach or Channel Seg		Reach or Channel Seg	
	Latitude	***Longitude***	***Latitude***	***Longitude***	***Latitude***	***Longitude***
Downstream Start:	30.18695	-93.42638	30.18780	-93.42560		
Upstream End:	30.18850	-93.41819	30.19015	-93.42425		

Estimated Length of Work Segment (ft): 2,935 860

Item No.	Proposed Recovery Measure	Quantity	Units	Unit Cost	Amount
1	Mobilization & Demobilization	1	LS	$5,000.00	$5,000
2	Channel Obstruction Removal (Light)	3,795	LF	$7.59	$28,804
3	Seeding, Sprigging and Mulching	3	AC	$200.00	$600
4					$0
5					$0

Note: Estimated cost of debris removal includes labor and hauling of material to landfill.

Total Estimated Construction Cost **$34,404**

Performance Time:

Production Rate	Segment Length	Production Time	Contract Time
200 Ft/Day	3,795 Ft	18.98 Days	22 Days
		3 Days Mobil	

Estimated Cost of Equipment with Labor ***(Per Revised Costs by BAS 2-9-06)***

Description of Work:	Cost per LF
Light with Complexities	$7.59

Estimated Cost of Seeding with Labor

Segment Length	Segment Width	No.of Segment	Acres	Cost per Ac	**Total Cost**
3,795 Ft.	25 Ft.	1	3	$200	$600

Comments:
Selected Alternative involves one side of channel and 20 ft. of top bank and removing only debris obstructing channel section, NOT floodplains.

DSR No: 019-05-057R | 2C Alternative

Section 5 Engineering Cost Estimate Worksheet

Parish: Calcasieu
Channel: L-12 and LL-12
Location: Choupique Bayou

Completed By: Steve Garner **Date:** 25-Feb-06

Type of Work: Debris Removal

Location of Work:

Township(s)	Range(s)	Section(s)	Quadrangle(s)
10 S	10 W	19	

	Reach or Channel Seg		Reach or Channel Seg		Reach or Channel Seg	
	Latitude	***Longitude***	***Latitude***	***Longitude***	***Latitude***	***Longitude***
Downstream Start:	30.18695	-93.42638	30.18780	-93.42560		
Upstream End:	30.18850	-93.41819	30.19015	-93.42425		

Estimated Length of Work Segment (ft): 2,935 860

Item No.	Proposed Recovery Measure	Quantity	Units	Unit Cost	Amount
1	Mobilization & Demobilization	1	LS	$5,000.00	$5,000
2	Channel Obstruction Removal (Light w/ Complexities)	3,795	LF	$7.59	$28,804
3	Seeding, Sprigging and Mulching	5	AC	$200.00	$1,000
4					
5					$0

Note: Estimated cost of debris removal includes labor and hauling of material to landfill.

Total Estimated Construction Cost **$34,804**

Performance Time:

Production Rate	Segment Length	Production Time	Contract Time
200 Ft/Day	3,795 Ft	18.98 Days	22 Days
		3 Days mobil.	

Estimated Cost of Equipment with Labor ***(Per Revised Costs by BAS 2-9-06)***

Description of Work: Light with Complexities — Cost per LF $7.59

Estimated Cost of Seeding with Labor

Segment Length	Segment Width	No.of Segment	Acres	Cost per Ac	**Total Cost**
3,795 Ft.	25 Ft.	2	5	$200	$1,000

Comments:
Selected Alternative involves both sides of channel and 20 ft. of top bank and removing only debris obstructing channel section, NOT floodplains.

Channel Obstruction Evaluation

SITE INFORMATION

Parish: Calcasieu	Site: Choupique Bayou L-12 and LL-12	
City: Sulphur		
Sponsor: Gravity Drainage District # 5, Ward 4	Reach:	L-12: 2935 l.f.
Date: week of 20 Feb 06		LL-12: 860 l.f.
Evaluation Team: Steve Tully, Mark Conkling, & Steve Garner		Total: 3795 l.f.

PHOTO NUMBERS AND BRIEF DESCRIPTION

Photo #	Description
4467	Pete Seay Road looking west
4473	L-12 Channel Debris
4478	LL-12 Alexia Dr. looking south

WAYPOINTS

(CIRCLE location and record in Decimal Degrees)

Start Work (D/S end)	30.18695; -93.42638
Midstream	
End Work (U/S end)	30.18850; -93.41819

NEARBY AND UPSTREAM STRUCTURES

(Fill in Numbers, Values, and Size)

CHURCHES		SCHOOLS		PUBLIC FACILITIES	
No. of Churches		No. of Schools		No. of Public Facilities	
HOMESITES				**BUSINESSES**	
No. of Homesites	13			No. of Businesses	
Average Value of Homes (X $1,000)	80.9			Size of Businesses	S M L

STREAM CROSSINGS

(CIRCLE type and write material, size and length)

TYPE	MATERIAL	NUMBER, SIZE, & LENGTH
Bridge	Concrete	1, 24ft wide by 45ft Waskey at Tony Dr. crossing L-12
Culverts		
Other or None		

UTILITIES

(CHECK the location of the utilities in the area and CIRCLE stream orientation)

X	Overhead (Power, Cable, etc.)	U/S	D/S
X	Buried (Gas, Sewer, water, etc.)	U/S	D/S
	Elevated Cross channel (Water, Gas, etc.)	U/S	D/S

Remarks:

CHANNEL CHARACTERISTICS

(CHECK appropriate box for slope and fill in dimensions information)

SLOPES		DIMENSIONS	
	1.5 : 1 or steeper	Top Width (ft.)	40
X	1.5 : 1 through 3 : 1 Slope	Bottom Width (ft.)	8
	Flatter than 3 : 1	Depth (ft.)	8

FLOW

Is Water Flowing?

YES NO

Is debris accumulating? (i.e. Leaves, Trash)

YES NO

STATEMENT OF PROBLEM

(CHECK the boxes as needed, and CIRCLE the size of debris that applies)

DEBRIS	IN CHANNEL	ACROSS CHANNEL
Pine Trees	X	X
Hardwoods	X	X
Shrubs		

SIZE OF DEBRIS: Light | Moderate | Heavy

BLOCKAGE

% of X-Section Obstructed:

Less than 25% | 26%-50% | 51%-75% | 76%-100%

Other (explain)

WORK METHOD AND LOCATION

(CHECK the box that best applies)

	Within Channel Floating Equipment (i.e. Barge or Marsh Buggy)
X	Within Channel Non - Floating Equipment (Excavator/Track-hoe, Spider, etc)
X	From Top Banks

ACCESS TO SITE

(Explain access issues and possible difficulties)

LL-12 access will be the most difficult with debris, fence, and homeowner properties.

Throughout project alternating banks will be necessary due to landowner property and fence restrictions.